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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/524,440	04/01/2005	Yoshiyuki Shoji	H6808.0077/P077	4457

24998 7590 11/18/2009
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EXAMINER

GORDON, BRIAN R

ART UNIT	PAPER NUMBER
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1797

MAIL DATE	DELIVERY MODE
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11/18/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/524,440

Applicant(s)

SHOJI ET AL.

Examiner

Brian R. Gordon

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-29 is/are pending in the application.
- 4a) Of the above claim(s) 9-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed July 13, 2009 have been fully considered but they are not persuasive.

As Brink, applicant asserts the reference does not disclose a chamber disposed in each of said plurality of channels. The examiner disagrees. The claim doesn't specify what (dimensions) structurally defines a chamber. As such, one is not precluded from interpreting the interior of the conduits as "chambers". The same interpretation is applicable to Marshall, Afeyan, and Kioke.

As to the statement in reference to the direct connection of valves to the respective elements of each reference, the claims imply that the chamber is an element of a single channel. The claims do not state that the chamber is a separate element from the channels. It appears that actually applicant is implying that for each liquid suction portion there is a first channel between the liquid portion and a respective chamber and a second channel connecting the chamber to the multiple valve. However the claim does not require such.

In view of such, the previous rejections are hereby maintained.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 36. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in

compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. Claims 1-5 and 7-8 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The multiple valve and its specific components including a rotation valve 303, a fixed valve 302, fixed valve 304, switching channels 305, channel 307, motor 206, operation controller, and mechanism-controller 65 that controls the operations of the elements are critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). It is unclear how the device can operate/function as claimed without the specific elements being present. As to claim 2, how can the multiple valve function with only a rotation valve? How can the device function without the motor and controllers being present to rotate the valve?

4. Claim 3 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an embodiment that includes a single channel switching valve 33 and a opening/closing valve 34, respectively driven by solenoids 43

and 44 does not reasonably provide enablement for and embodiment that includes a multiple valve and a plurality of channel switching valves as claimed in claim 3. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

5. Claims 3 and 8 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 3 states that there is a channel switching valve disposed in each of the said plurality of channels. Each channel does not include a channel-switching valve. As described in the specification (Embodiment 2) and shown in figure 14, there is a single channel switching valve connected individually to a first plurality of channels that are individually connected to a respective chamber and the channel switching valve is individually connected to a second plurality of channels that are individually connected to a respective capturing containers via a suction portion or element 36. Therefore the claim is directed to new matter.

As to claim 8, the examiner fails to locate any specific dimensions of each of the respective channel portions or any relative direct comparisons of the respective channel portions to each other.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-5 and 7-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 2, it is unclear what is the structural relationship of the claimed rotational valve to that of the structural elements in claim 1.

It appears applicant is referring to the element referenced as rotation valve 303. However, it should be noted that the "rotation valve" is an element of the multiple valve 205 as described at paragraph 0042.

Claim 7 is not further structural limiting. No liquid is positively claimed as a structural limitation of the apparatus. "The volume to be sucked" is not a structural limitation of the apparatus. One is free to choose any desired volume to be sucked. The size of the chamber cannot be defined relative to an unclaimed element or unspecified amount of liquid that can be of any indefinite value. There is no way for one to determine what is ten times larger than an unspecified volume to be sucked.

Claim 7 recites the limitation "the volume of said liquid to be sucked". There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the portion of plurality of channels that connects said multiple valve to said chambers.....the portion of each said plurality of channels...." There is insufficient antecedent basis for the respective portions in the claim.

Double Patenting

8. Claim 5 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 4. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Claims 4 and 5 are essentially duplicate claims. The only difference in the claims is the conditional phrases beginning with "when". The phrases are directed to conditional/intended use of the device under certain conditions. The conditions stated in claims do not add any further structure to that claimed. The structure of claim 4 is the same structure of that in claim 5.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1-5 and 7-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Brink et al. Us 2002/0164821. Brink et al. discloses a device for dispensing a plurality of liquids is providing, including: (a) a plurality of containers (chambers/containers); (b) a

selection valve (switching/multiple valve 30) moveable between a plurality of positions enabling fluid communication between a respective one of said plurality of containers and an opening and a position enabling fluid communication between said opening and an outlet; (c) a pump connected to said opening and having: (i) a conduit connecting the pump to the opening; and (ii) a settling vessel arranged between the ends of the conduit, for accommodating a spacer liquid, wherein the internal diameter of the settling vessel is greater than the internal diameter of the conduit. (abstract).

11. Claims 1-5 and 7-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Marshall et al US 6,887,429.

Marshall et al. discloses a device comprising several reagent reservoirs 31 (containers/chambers) can be packaged in a disposable reagent cartridge 30. The reagent cartridge 30 is configured to fit onto a mounting bracket 51, shown in FIGS. 4 and 5, having a plurality of hollow needles 52 (suction portions) positioned to extend into the reagent cartridge. Each needle 52 is positioned to align with a respective reagent reservoir 31 when the reagent cartridge 30 is inserted into the mounting racket. The needles 52 are sized to penetrate the septa 32 in the reagent cartridge 30, but not the frits 33 at the bottom of the reagent reservoirs.

The needles 52 are coupled to the multi-position valve 55 (switching/multiple valve)(FIG. 3) by short lengths of narrow bore tubing 53 or other suitable flow conduits that form the reagent stream line. Only one cartridge connection is shown for purposes of clarity. Once the reagent cartridge 30 is installed on the mounting bracket 51 and the needles 52 are in fluid communication with the respective reagent reservoirs 31, a

reagent makeup sequence, wherein selected reagents are withdrawn from the reagent cartridge 30 in selected volumes, can be initialized for a desired medical diagnostic test using the SIA assembly 5. The device also includes a pump 57. (column 7, lines 2-51).

12. Claims 1-5 and 7-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Afeyan et al. US 6,344,172.

Afeyan et al. disclose an apparatus for the separation and analysis of proteins, which includes a sample input, a first liquid chromatography column, a multiport injection valve connecting the sample input to the column, a pump for providing variable pressure delivery of a solution to the column via the multiport valve, and a program for specifying a sequence of system control programs. (abstract).

As seen in Figure 3, the system includes (switching/multiple valves 116, 151) that allows suction from reservoirs 117a-d (containers/chambers) via channels. The fluids are transported via pump 119 driven via a stepper motor.

13. Claims 1-5 and 7-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Koike, US 5,660,792.

Koike discloses a system that comprise a plurality of containers/chambers M(1-6) from which liquid is sucked and connected via channels to a selection valve 26 (switching/multiple valve), and a pump 28A-C, and second valve (unlabeled in Figure 5) between the pumps and selection valve.

14. Claims 1-2, 4-5, and 7-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Uffenheimer et al. 7,198,956.

Uffenheimer et al. disclose the invention as claimed. As illustrated in figure 2, the device includes a multiple valve (110) connected via single channel to pump mechanism (111) and to a plurality of suction portions (92) via a plurality of channels (108, 136) that are connected to chambers (unlabeled) that are connected suction portions, and capturing containers (102 , 116).

As to claim 8, Uffenheimer et al. disclose the small diameter flexible plastic tubing 108, 134, and 136 may be TEFLON (polytetrafluoroethylene) tubing or polyolefin tubing with inside diameters of approximately 0.030 0.040 inches, 0.040 0.060 inches, and 0.020 0.030 inches, respectively. Other kinds and sizes of tubing may also be useable. (column 7, lines 45-50).

Typically, the tubular member 92 has an diameter of approximately 0.028 inches.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ahlfors; Charles E. et al.; Fujimoto; Keiichi et al.; Takenaka; Kei et al.; and Gavin; Michael et al. disclose devices including valves and pumps.

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian R. Gordon whose telephone number is 571-272-1258. The examiner can normally be reached on M-F, 1st Fri. Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brian R Gordon/
Primary Examiner
Art Unit 1797